

REMARKS

The Applicant has carefully reviewed and considered the final Office Action of 7 June 2007, and respectfully requests reconsideration.

Claims 2, 5-7, 11-14, 28-34, and 36-37 (but not claim 35, from which claims 36-37 depend) are rejected under 35 U.S.C. Section 101 because the inventions claimed therein allegedly constitute non-statutory subject matter. Specifically, the Examiner contends that "[t]he claims require both apparatus and method steps, for example in claim 7 the first nozzle is 'emitting' air." Furthermore, these claims are rejected under 35 U.S.C. Section 112, second paragraph, since the Examiner contends without providing any reasoning that they are "indefinite as to what they require."

First of all, the rejections of dependent claims 36 and 37 as lacking utility and otherwise being indefinite are clearly improper. These claims depend from claim 35, which is not rejected, and the Examiner provides absolutely no basis for rejecting these dependent claims. These claims require that the means for emitting air comprises an air-emitting nozzle, and that the means for emitting fluid comprises a water-emitting nozzle. Absolutely no "method steps" are recited in these claims, which is the entire basis for the Examiner's position. Accordingly, reconsideration is respectfully requested.

As for claims 2, 5-7, 11-14, and 28-34, Applicant respectfully submits that they also recite statutory subject matter and are perfectly definite, since no "method steps" appear in any of these claims. Instead, the claims at issue identify the function performed by the recited structures (e.g., the "air-emitting" nozzles of claims 7 and 28; the "air-atomizing nozzle" of claim 5; and the "gathering" shoe of claims 7 and 28 (to which the Examiner interestingly makes no objection)) comprising the claimed "apparatus for cooling filaments." The law is well established that "[a] patent applicant is free to recite features of an apparatus either structurally or functionally." *In re Schreiber*, 44 USPQ2d 1429 (Fed. Cir. 1997) (citing *In re Swinehart*, 439 F.2d 210, 212, 169 USPQ 226, 228 (CCPA 1971)).¹ Nevertheless, to be sure, claims 2 and 11 are

¹ See also *In re Garnero*, 412 F.2d 276, 278-79, 162 USPQ 221, 223 (CCPA 1969) (holding that "the recitation of the particles as 'interbonded one to another by interfusion between the surfaces of the perlite particles' is as capable of being construed as a structural limitation as 'intermixed,' 'ground in place,' 'press fitted,' 'etched,' and 'welded,' all of which at one time or another have been separately held capable of construction as structural, rather than process, limitations").

adjusted to make clear the function being performed by the recited structures, and claim 7 is amended to omit reference to "contacting" a size applicator (which structure is later introduced in claim 12 without the functional language). Accordingly, all claims are in full compliance with Sections 101 and 112 of the Patent Act, and withdrawal of the corresponding rejections is in order.

As for claim 31, the Examiner's rejection is on the basis that it improperly recites that there are "filaments emanating from the bottom plate." Respectfully, this is not an accurate characterization, since the claim requires "a bottom plate *from which filaments emanate*" (emphasis added). There is no "method step" recited, but rather merely a description of the function performed by the bottom plate to establish the environment for the various nozzles later recited. Simply put, there is nothing wrong with this claim, as evidenced by U.S. Patent No. 7,194,874, issued by the present Examiner, in which claim 1 recites "a tip plate or orifice plate *through which the molten material flows to form the fibers . . .*". There is no fundamental difference between the highlighted language in Applicant's claim and that in the '874 patent in terms of describing the function performed by an apparatus, and not a process step.

A further example of the propriety of claim 31 and the other claims rejected under Sections 101 and 112 is afforded by U.S. Patent No. 5,922,100, also examined and allowed by the present examiner. Claim 1 in this patent recites as follows:

1. A silicon dioxide containing soot-producing burner comprising:

(a) a burner subassembly which comprises:

a back block having a plurality of *gas-carrying* passages,

a face block having a central gas-carrying passage and a plurality of gas-carrying passages surrounding the central gas-carrying passage,

a manifold plate between the back block and the face block, said manifold plate comprising a plurality of orifices *for providing equalization of a pressure of gas flowing through the plurality of gas-carrying passages surrounding the central gas-carrying passage of the face block*, and;

(b) a burner mounting block which comprises a first burner mounting block bolt and a first burner mounting block bolt hole for attachment of said burner mounting block to a *gas-supplying* manifold; wherein said burner subassembly is mounted on the burner mounting block.

This *apparatus* claim is obviously replete with the phrases “gas-carrying” and “gas-supplying,” used to describe the *function* performed by the claimed nozzles and manifold, respectively. Fundamentally, this is no different from Applicant’s “air-emitting” nozzle in the claims allegedly violating Sections 101 and 112 of the Patent Act. Yet, this same Examiner found “gas-emitting” and “gas-supplying” perfectly definite, and made no finding that the invention lacked utility as reciting some unspecified “method steps,” as contrasted with a *function* being performed. *See also* U.S. Patent No. 6,776,013, issued by the present Examiner, in which claim 1 recites a “tubular member having a smooth curvilinear surface for minimizing turbulence in *a fiber stream flowing through said forming bucket during said gas attenuation process. . . .*” (emphasis added); U.S. Patent No. 6,735,978, issued by the present Examiner, in which claim 1 recites “a plurality of nozzles located above and below said fusing burner unit and capable of blowing an oxidation gas against a preform *being drawn at a blow angle, θ* , relative to the passing preform, which is in the range of $20^\circ < \theta < 60^\circ$ ” (emphasis added).

The case decision recited by the Examiner in support of the Section 101 and 112 rejections concerned a remarkably different situation from the present one. In *Ex parte Lyell*, 17 USPQ2d 1542 (Bd. Pat. App. & Int. 1990), the claim at issue recited as follows:

2. An automatic transmission tool in the form of a workstand and method for using same comprising:
 - a support means,
 - and [sic] internally splined sleeve affixed upright to said support means,
 - a threaded adjustment bolt threadably engaged through a hole in the bottom of said support means and projecting upward through said support frame into said sleeve,
 - and further comprising the steps of*
 1. positioning the output end of an automatic transmission onto said upright sleeve,
 2. removing the internal components of said automatic transmission from the casing of said transmission,
 3. repairing and replacing said internal components back into said casing, and
 4. adjusting said internal components for fit and interference by means of adjusting said upwardly projecting adjustment bolt.

The present claims starkly contrast with that under consideration in *Ex parte Lyell*, since none of the claims at issue recite any process steps without identifying the corresponding

structure performing the claimed function. Accordingly, the decision cited is not on point, and reconsideration is respectfully requested.

As for the Examiner's statement that "the claims are clearly hybrid claims," Applicant notes that Board's holding in *Ex parte Lyell* that: "[w]e . . . *recognize that certain types of claims which appear to be 'hybrid' are permitted* in U.S. patent practice," and expressly discussed "product-by-process" claims. *Ex parte Lyell, supra* (emphasis added). While the claims at issue are not in the "product-by-process" category, the Board's holding buttresses the well-established principle of patent law that there is simply nothing improper about describing a structure by the function it performs. *In re Swinehart, supra*. ("the characterization 'functional' . . . to indicate nothing more than the fact that an attempt is being made to define something . . . by what it does rather than by what it is (as evidenced by specific structure or material, for example). In our view, *there is nothing intrinsically wrong with the use of such a technique in drafting patent claims.*") (emphasis added).

Finally, the Examiner attempts to characterize Applicant's statement that the function of "air-emitting" is "being performed" as an "admission" that the claim recites "steps." Nothing could be further from the truth. Stating that a function is "being performed" by a structure in a claim is precisely what the Court of Customs and Patent Appeals approved of in the precedential *Swinehart* decision: There is nothing wrong with defining something by *what it does*. That is all the present Applicant is claiming here, and the Examiner has not established to the contrary. Accordingly, the rejections under Sections 101 and 112 are improper and should be withdrawn.

Turning to the substantive issues, Applicant further requests reconsideration of the holding that U.S. Patent No. 4,071,341 to Bohy et al. ("Bohy") anticipates claims 2, 5, 7, 12, 13, and 28. As noted above, claims 7 and 28 both require an "air-emitting" nozzle, but Bohy plainly discloses nozzles 13, 15 for emitting water and lubricants only (see col. 3, lines 23-24 and 51-58). On this point, the Examiner and Applicant are in agreement (see the Office Action of January 24, 2006, p. 5, second paragraph, "Bohy does not explicitly teach a specific nozzle . . . which emits air."). Hence, Bohy does not expressly disclose the inventions of claims 5, 7, and 28, including the properly expressed function performed by the nozzle, with the requisite strict identity to support the

anticipation rejection made. *See Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047, 34 USPQ2d 1565, 1567 (Fed. Cir. 1995) (holding that to anticipate a claim, a prior art reference must disclose every limitation of the claimed invention) and *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970) (“All words in a claim must be considered in judging the patentability of that claim against the prior art.”). The Examiner does not contend otherwise, but instead simply contends that “emitting is a method – not structure,” which is not the case for the foregoing reasons. Rather, “emitting” air is a function that must be considered in evaluating the patentability of this claim. Accordingly, favorable reconsideration of the anticipation rejection of claim 1 as now embodied in claim 28 is respectfully requested.

Reconsideration of the obviousness rejection based on Bohy in further view of U.S. Patent No. 4,168,959 to Loeffler (“Loeffler”) as rendering the inventions of claims 6, 11 and 14 is also respectfully requested. Like Bohy, Loeffler merely discloses the use of water in filament cooling, and thus does not disclose an air-emitting nozzle. Accordingly, it cannot possibly disclose, teach, or suggest the manifold for conveying air to the nozzle, as required in claims 6 and 11.

As for claim 14, the Examiner previously alleged that “Loeffler indicate[s] that angle is a result effective variable,” and then suggests that the recited invention merely constitutes “optimization within a range.” Loeffler merely states in the cited passage that a nozzle for spraying a binder may be positioned at “any angle” for coating the filaments. Applicant’s invention, in stark contrast, comprises an air-emitting nozzle positioned at one of a particular angle of angles to effect cooling of the filaments in the most efficient and effective manner. Absolutely nothing in Loeffler teaches or even remotely suggests the claimed air-emitting nozzle, so the Examiner’s reliance on the concept of “routine experimentation” and “optimization within prior art conditions” is entirely misplaced. Reconsideration of the rejection is therefore respectfully requested.

With respect to the new claims, Applicant notes that the Examiner makes no substantive rejection of claims 29-34, the only basis for rejecting being under Sections 101 and 112. However, reconsideration of the substantive rejection of claim 35 is also respectfully requested. This claim includes limitations in “means plus function” format, and thus subject to the strictures of Section 112, paragraph six of the Patent Act for

purposes of examination. Proper examination therefore first requires a finding that the prior art performs the identical function specified in the claim. *See* MPEP 2182 (“the application of a prior art reference to a means or steps plus function limitation **requires that the prior art element perform the identical function specified in the claim**”) (emphasis added). Further required is an evaluation of the structures disclosed in the Applicant’s specification for performing the recited function, as well as findings that the prior art performs the recited function using identical or equivalent structures to those described in the Applicant’s specification. *See* MPEP Section 2181 (“the ‘broadest reasonable interpretation’ that an examiner may give means-plus-function language is that statutorily mandated in paragraph six. Accordingly, the PTO may not disregard the structure disclosed in the specification corresponding to such language when rendering a patentability determination.”).

In the present case, the entirety of the Examiner’s statement for rejecting claim 35 is as follows:

It is clear that the structures are equivalents: they are both items with holes through which fluids may pass.

This statement of rejection has fewer words than the claim itself, and otherwise misses the mark for several reasons.

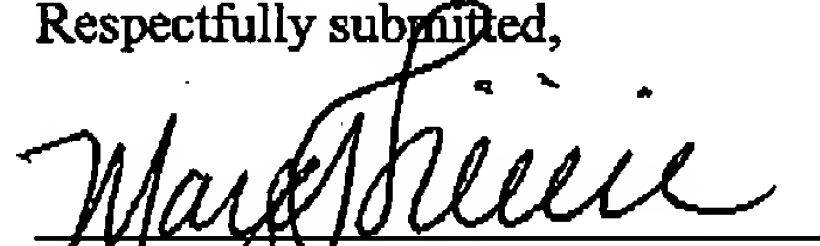
First of all, the Examiner previously admitted that “Bohy does not explicitly teach a specific nozzle . . . which emits air” (see the Office Action of January 24, 2006, p. 5, second paragraph). It follows that Bohy fails to disclose any structure performing the identical function specified in the claim; namely, emitting air to the filaments emanating from any bottom plate. The Examiner has thus in no way established that the “prior art element” performs the identical function specified in the claim, as required for a proper rejection. *See, e.g., Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 4 USPQ2d 1737 (Fed. Cir. 1987) (*en banc*), *cert. denied*, 485 U.S. 961 and 1009 (1988) (“To determine whether a claim limitation is met literally where expressed as a means for performing a stated function, the court must compare the accused structure with the disclosed structure, and must find equivalent structure **as well as identity of claimed function for that structure.**”) (emphasis added).

Secondly, the Examiner simply states in making the rejection that "the structures" are "equivalents," without in any way identifying the corresponding structure in Applicant's specification identical or equivalent to the elements disclosed in the references for performing the same functions, as required by the law. This makes it virtually impossible for Applicant to contest the rejections, since it is not at all clear whether the reference cited discloses "identical or equivalent structures to those described in the Applicant's specification" for performing the claimed function.

For the foregoing reasons, it is respectfully submitted that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claim 35 by making explicit findings of fact with regard to the structures disclosed in the Applicant's specification for performing each recited function, as well as findings that the prior art not only performs the recited function, but also does so using identical or equivalent structures to those described in the Applicant's specification.

In summary, all the pending claims patentably distinguish over the prior art and should be formally allowed. Upon careful review and reconsideration it is believed the Examiner will agree with this proposition. Accordingly, the early issuance of a formal Notice of Allowance is earnestly solicited. Any fees required in connection with this Response may be debited to Deposit Account 50-0568.

Respectfully submitted,


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